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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/582,924
Filing Date: April 30, 2007
Appellant(s): DEDEGIL ET AL.

Andre Pallapies
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed November 16, 2010 appealing from the Office action mailed June 25, 2010.

Art Unit: 1712

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

Art Unit: 1712

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

2002/0074026	KIM	6-2002
6,413,366	KEMPER	7-2002
6,402,855	DAMRON	6-2002
5,234,112	VALENZUELA	8-1993

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

Claims 16-22, 24, 26-28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. PGPub 2002/0074026, hereinafter '026) in view of Kemper (U.S. Patent 6,413,366, hereinafter '366).

Claim 16: '026 teaches a dishwashing machine [title; abstract] comprising a dishwashing container [(d), Fig. 1; page 1, paragraph 6] that holds items to be subjected to a dishwashing liquid [Fig. 1, page 1, paragraph 6] and a filter system [(62 & 64), Fig. 1; page 1, paragraph 8] in communication with the dishwashing container so that some of the dishwashing liquid passes through the filter system wherein dishwashing residue contained in the dishwashing residue contained in the dishwashing liquid is at least partially retained by the filter [page 1, paragraph 11]. '026 does not teach that the filter system includes a foam volume or that at least some of the dishwashing liquid can be discharged to the foam volume so that dishwashing residue contained in the dishwashing liquid is retained by the foam volume. However, '366 teaches a filter for removing contaminants from a solution using foam such that the liquid solution is passed through the foam in order to remove contaminants from the liquid [abstract; col. 2, line 30—col. 3, line 7]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filter taught by '366 in place of the filter of '026 with a reasonable expectation of success because '366 teaches that the filter removes contaminants from an

Art Unit: 1712

incoming liquid by use of foam in order to retain the contaminants in the foam. Therefore, modified '026 teaches that the dishwashing liquid flows into a filter system and through a foam volume in order to retain contaminants from the dishwashing liquid in the foam.

Claim 17: '026 and '366 teach the limitations of claim 16 above. '366 teaches mixing an incoming liquid with an incoming gas to produce the foam [reads on "foam developer"; Fig. 1; col. 2, lines 30-41]. Modified '026 teaches that the liquid introduced to the filter is dishwashing liquid, so the mixing of dishwashing liquid with a gas produces foam. Regarding the recitation "mix...at least one of the dishwashing liquid and a non-dishwashing liquid with air", this recitation is a statement of intended use which does not patentably distinguish over modified '026 since modified '026 meets all the structural elements of the claim(s) and is capable of mixing the dishwashing liquid with air if so desired. See MPEP 2114.

Claim 18: '026 and '366 teach the limitations of claim 16 above. '366 also teaches a filter container for retaining the foam [see Fig. 1].

Claim 19: '026 and '366 teach the limitations of claim 18 above. '366 also teaches that the filter container includes a wall on the filter container [see wall to the left where the fluids are introduced to the container; Fig. 1], the wall has an opening through which a gas can be introduced into the filter container [Fig. 1; col. 2, lines 30-36]. Regarding the recitation "at least one of air", this recitation is a statement of intended use which does not patentably distinguish over modified '026 since modified '026 meets all the structural elements of the claim(s) and is

Art Unit: 1712

capable of introducing air as the particular gas if so desired. See MPEP 2114. '366 discloses the claimed invention except for the wall having openings over at least a portion thereof. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have an additional opening in the wall to introduce the gas, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claims 20 and 21: '026 and '366 teach the limitations of claim 18 above. '366 also teaches that the filter container includes a wall on the filter container [see wall to the left where the fluids are introduced to the container; Fig. 1], the wall has an opening through which a liquid can be introduced into the filter container and liquid is introduced through a nozzle with a plurality of openings [reads on "distributor nozzle...liquid is introduced into the filter container in fine jets"] [Fig. 1; col. 2, lines 30-44 and 59-62]. Modified '026 teaches that the liquid introduced to the filter is dishwashing liquid.

Claim 22: '026 and '366 teach the limitations of claim 18 above. '366 teaches that the filter has a first outlet [(S'), Fig. 1] and a second outlet [(R), Fig. 1]. Regarding the recitation "a first outlet through which the cleaned dishwashing liquid is discharged...a second outlet through which the foam volume is discharged", this recitation is a statement of intended use which does not patentably distinguish over modified '026 since modified '026 meets all the structural elements of the claim(s) and is capable of introducing air as the particular gas if so desired. See MPEP 2114.

Art Unit: 1712

Claim 24: '026 and '366 teach the limitations of claim 22 above. '366 teaches that the outlet [(S') located within (7) in Fig. 1 – reads on “first outlet”] has a variable-height overflow. Based upon the rejection under 35 U.S.C. 112, second paragraph above, the limitation is met.

Claim 26: '026 and '366 teach the limitations of claim 18 above. '026 also teaches that the filter container is disposed between the dishwashing container [(d), Fig. 1] and an outer wall of the dishwashing machine [the entire casing in Fig. 1].

Claim 27: '026 teaches a dishwashing machine [title; abstract] comprising a dishwashing container [(d), Figs. 1&3; page 1, paragraph 6] that holds items to be subjected to a dishwashing liquid [Figs. 1 & 3, page 1, paragraph 6] and a filter system [(80, 81, 82), Fig. 3; pages 3-4 paragraphs 55-65] in communication with the dishwashing container so that some of the dishwashing liquid passes through the filter system [pages 3-4 paragraphs 55-65] and that it is known to remove the contaminants collected via the filter from the dishwasher [Figs. 10A&B; pages 3-4 paragraphs 55-65]. '026 does not teach that the filter system includes a foam volume or that at least some of the dishwashing liquid can be discharged to the foam volume so that dishwashing residue contained in the dishwashing liquid is retained by the foam volume. However, '366 teaches a filter for removing contaminants from a solution using foam such that the liquid solution is passed through the foam in order to remove contaminants from the liquid and that the liquid and foam both exit the filter [abstract; col. 2, line 30 - col. 3, line 7]. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the filter taught by '366 in place of the filter of '026 with a reasonable expectation of success because

Art Unit: 1712

'366 teaches that the filter removes contaminants from an incoming liquid by use of foam in order to retain the contaminants in the foam. Therefore, modified '026 teaches that dishwashing liquid flows into the filter system where dishwashing residue is retained by the foam (see teaching of '366), and the newly filtered dishwashing liquid is cycled back to the dishwasher via the circulation pump (see circulation pump (70) of '026), and the foam containing the residue is discharged from the washer using the drain pump (see drain (70) of '026).

Claim 28: '026 and '366 teach the limitations of claim 27 above. '366 teaches mixing an incoming liquid with an incoming gas to produce the foam [reads on “foam developer”; Fig. 1; col. 2, lines 30-41]. '366 also implicitly teaches that the liquid is mixed with air because '366 teaches that air bubbles are formed so that contaminants will accumulate in the air bubbles [col. 2, lines 44-54]. Modified '026 teaches that the liquid introduced to the filter is dishwashing liquid, so the mixing of dishwashing liquid with air produces foam.

Claim 30: '026 and '366 teach the limitations of claim 27 above. '366 also teaches that a liquid can be introduced through a nozzle with a plurality of openings [reads on “distributor nozzle...liquid is introduced into the filter container in fine jets”] [Fig. 1; col. 2, lines 30-44 and 59-62]. Modified '026 teaches that the liquid introduced to the filter is dishwashing liquid.

Art Unit: 1712

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. PGPub 2002/0074026, hereinafter ‘026) in view of Kemper (U.S. Patent 6,413,366, hereinafter ‘366), and further in view of Damron et al. (U.S. Patent 6,402,855, hereinafter ‘855).

Claim 25: ‘026 and ‘366 teach the limitations of claim 17 above, but they do not teach that the dishwashing liquid is supplied to the foam developer by a circulating pump. However, ‘855 illustrates that it is known to withdraw solution from a container for washing using a pump [reads on “circulating pump” because the solution is circulated from (112) in Fig. 6 back into the container at (132/158)] and then feeding the solution through a filter [(108), Fig. 6] before it is returned to the chamber [see Fig. 6; cols. 9 and 10]. Therefore, it would have been obvious to an ordinary artisan to supply the dishwashing liquid of modified ‘026 to the foam developer via circulating pump as taught by ‘855 because ‘855 illustrates it is known to withdraw a solution from a container using a pump, feed it through a filter before the solution is circulated back into the container.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim et al. (U.S. PGPub 2002/0074026, hereinafter ‘026) in view of Kemper (U.S. Patent 6,413,366, hereinafter ‘366), and further in view of Valenzuela et al. (U.S. Patent 5,234,112, hereinafter ‘112).

Claim 29: ‘026 and ‘366 teach the limitations of claim 27 above. ‘026 and ‘366 do not teach externally generating the foam and then introducing the foam into the filter container.

However, ‘112 teaches that it is known to use a foam reactor [reads on “filter”; (1), Fig. 2] with

Art Unit: 1712

an external foam generator [(9), Fig. 2] so that the solution entering the reactor and the foam introduced into the reactor are mixed within the reactor so that the particles to be removed have time to adhere to the foam [col. 1, lines 36-56 and 65-67; col. 2, lines 28-48]. Therefore, it would have been obvious to an ordinary artisan to use an external foam generator as illustrated by '112 in the modified method of '026 with a reasonable expectation of success because '112 teaches that by externally generating the foam and introducing it to the reactor there is time for the particle being removed to adhere to the foam.

Allowable Subject Matter

Claim 23 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Kim teaches a conventional dishwasher that recycles the filtered liquid or drains the filtered liquid, but it does not teach draining the filtered particles contained within the foam or using a three-way valve to selectively determine if the liquid is recycled or the particles are drained as is required by the claim limitations. Kemper teaches that the foam containing the particles and the cleaned liquid exit the filter from two different locations without using a three-way valve to direct the discharge of either the cleaned liquid or the foam containing the particles. Kamikawa teaches that it is conventionally known to use a three-way valve to selectively determine if the liquid is circulated or drained. However, the combination of Kim and Kemper do not lead one of ordinary skill in the art to direct both the foam containing particles and the cleaned liquid

Art Unit: 1712

through the same outlet such that a valve can determine that the cleaned liquid is recycled and the foam containing particles is discharged as waste. The search conducted by the examiner has not indicated more relevant documents. Thus, the art of record does not fairly teach or suggest using a three-way valve to selectively decide if the cleaned liquid is recycled or the foam containing particles is discharged as waste.

(10) Response to Argument

Regarding claims 16-22, 24, 26-28 and 30 over Kim et al. (U.S. PGPub 2002/0074026) in view of Kemper (U.S. Patent 6,413,366)

In response to appellants' arguments regarding Kemper as non-analogous art, the Examiner respectfully disagrees. The Examiner is aware that Kemper is directed to a process used in making paper. However, Kemper is reasonably pertinent to a particular problem with which the inventor is concerned, namely removing contaminants from a liquid. Kemper teaches a conventional method for removing contaminants from a solution using foam such that the liquid solution is passed through the foam in order to remove contaminants from the liquid. The Examiners reliance upon Kemper's filtering method using foam is the epitome of what one of ordinary skill in the art would do. An ordinary artisan would look to a filtering method in one area and apply it to a filtering method in another area. This is exactly what the Examiner has done in the instant case. It would have been obvious to use the foam filtering method of Kemper as the means of filtering in the method of Kim because Kemper teaches that the filter removes contaminants from an incoming liquid by use of foam in order to retain the contaminants in the

Art Unit: 1712

foam. Thus, Kemper is analogous art and satisfies the requirement for use as prior art because it is reasonable pertinent to a particular problem with which the inventor is concerned.

In response to appellants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to appellants' argument that there is no teaching, suggestion, or motivation to combine the references, the examiner recognizes that obviousness may be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988), *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992), and *KSR International Co. v. Teleflex, Inc.*, 550 U.S. 398, 82 USPQ2d 1385 (2007). In this case, Kim teaches a dishwashing machine that contains a filter system wherein dishwashing residue contained in the dishwashing liquid is at least partially retained by the filter. Kim does not teach that the filter system includes a foam volume or that at least some of the dishwashing liquid can be discharged to the foam volume so that dishwashing residue

Art Unit: 1712

contained in the dishwashing liquid is retained by the foam. Kemper teaches a filter for removing contaminants from a solution using foam in order to remove contaminants from the liquid. Because both Kim and Kemper teach filter systems for removing contaminants from liquids, it would have been obvious to one skilled in the art to substitute one filter system for the other to achieve the predictable result of removing contaminants from liquids.

In response to appellants' argument regarding the flotation process in Kemper, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Furthermore, the filter is not excluded by the current claim limitations, and the appellants' have not claimed the particular structure in the instant claims.

In response to appellants' argument regarding the claimed structural feature of a foam developer that mixes dishwashing liquid and non-dishwashing liquid, it is not found persuasive for the reason that none of the claims have ever recited any such "structural feature ". Therefore, applicant's arguments are more specific than the claims. It is noted that the features upon which applicant relies (i.e. structural feature) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Finally,

Art Unit: 1712

the claim only states that the foam developer is operable to mix liquid formed of at least one of the dishwashing liquid and a non-dishwashing liquid with air to produce the foam. The combination of Kim and Kemper are going to mix whatever liquid is present within the dishwashing system with air to make foam.

Regarding claim 25 over Kim et al. in view of Kemper, and further in view of Damron et al. (U.S. Patent 6,402,855)

Appellants' do not present any additional arguments within these sections.

Regarding claim 29 over Kim et al. in view of Kemper, and further in view of Valenzuela et al. (U.S. Patent 5,234,112)

Appellants' do not present any additional arguments within these sections.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Nicole Blan/
Examiner, Art Unit 1712

Conferees:

Application/Control Number: 10/582,924

Page 15

Art Unit: 1712

/Anthony McFarlane/
Primary Examiner

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1714